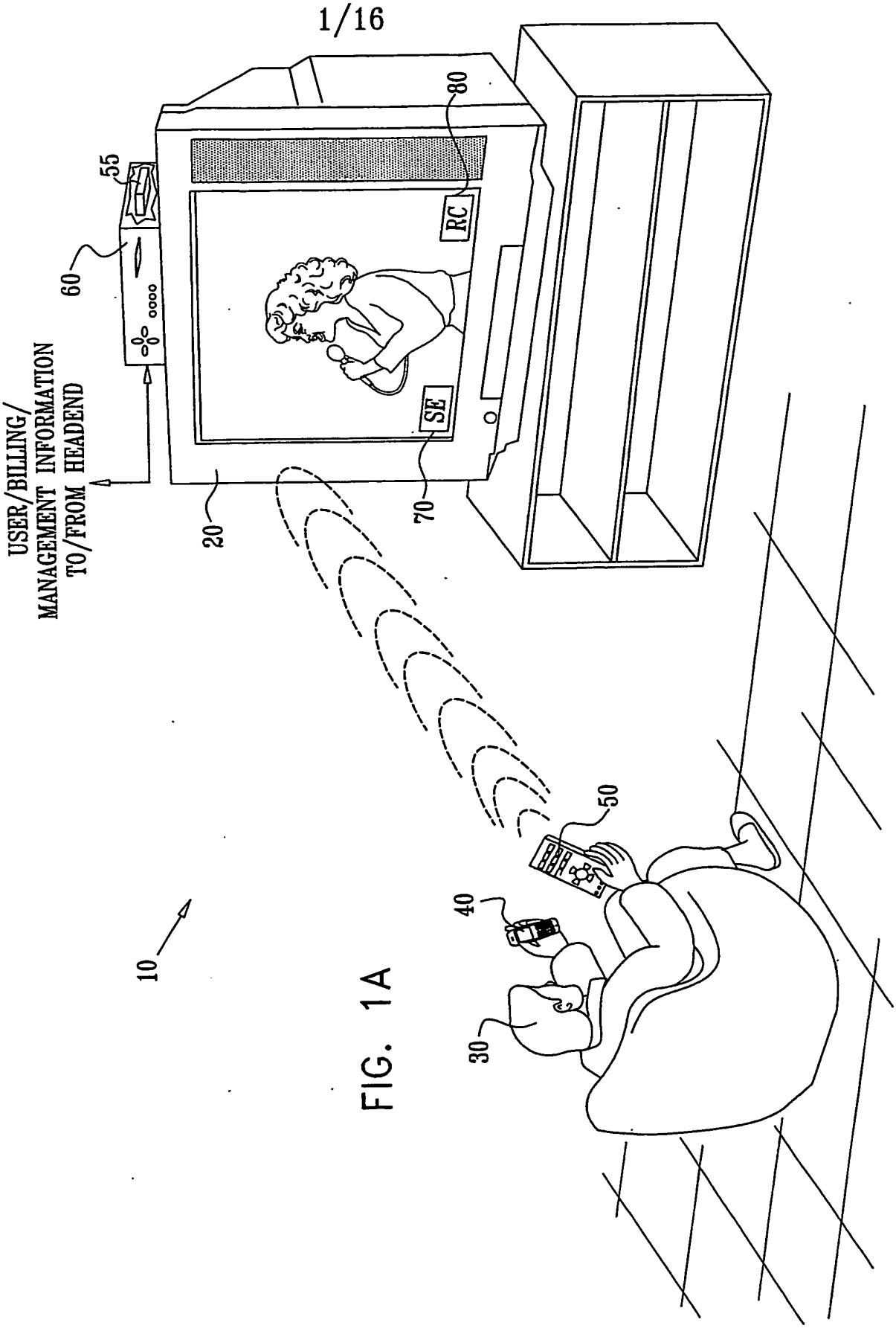

USER/BILLING/
MANAGEMENT INFORMATION
TO/FROM HEADEND
10
20
30
40
50
55
60
70
80
RC
SE

FIG. 1A

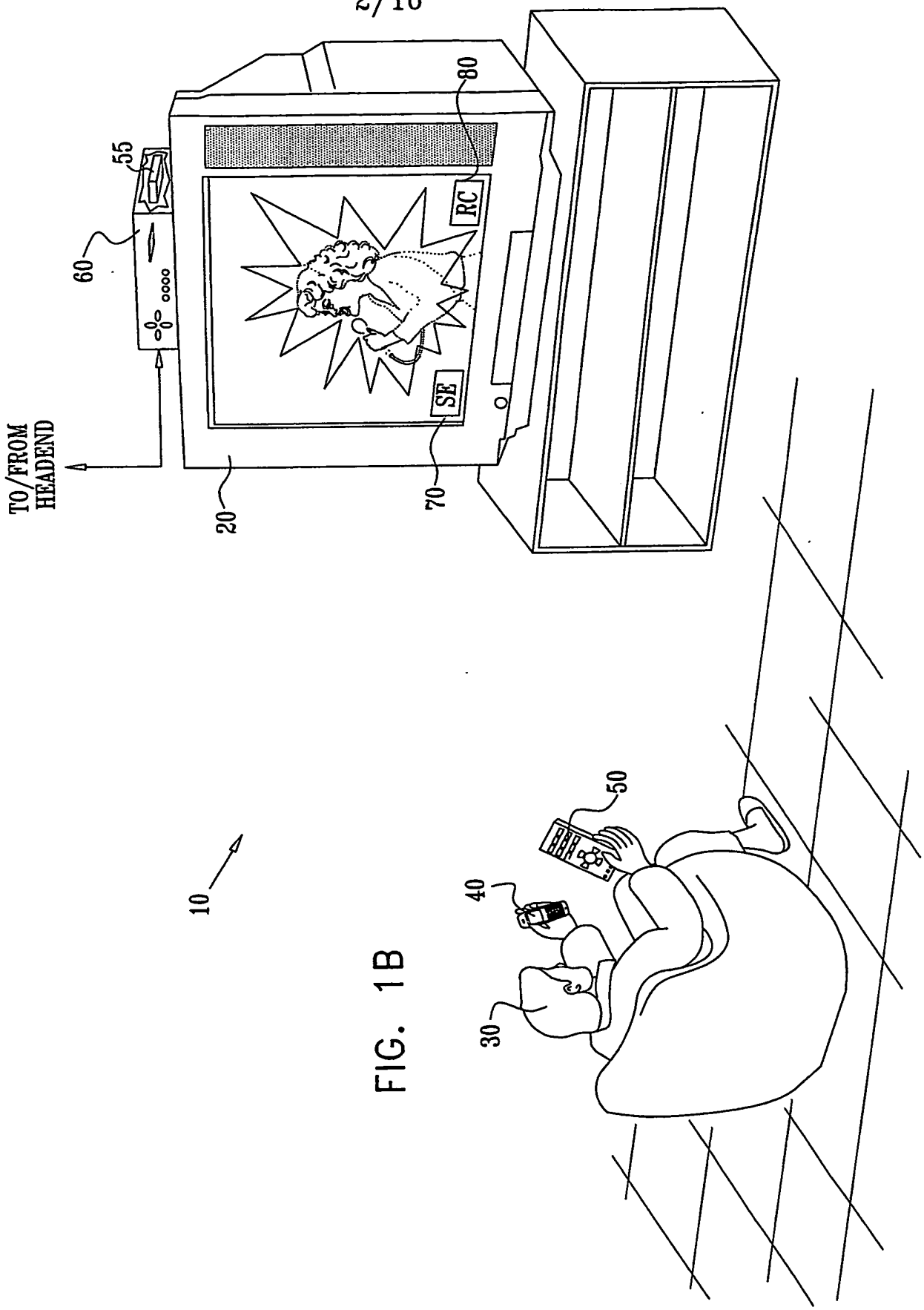


FIG. 1B

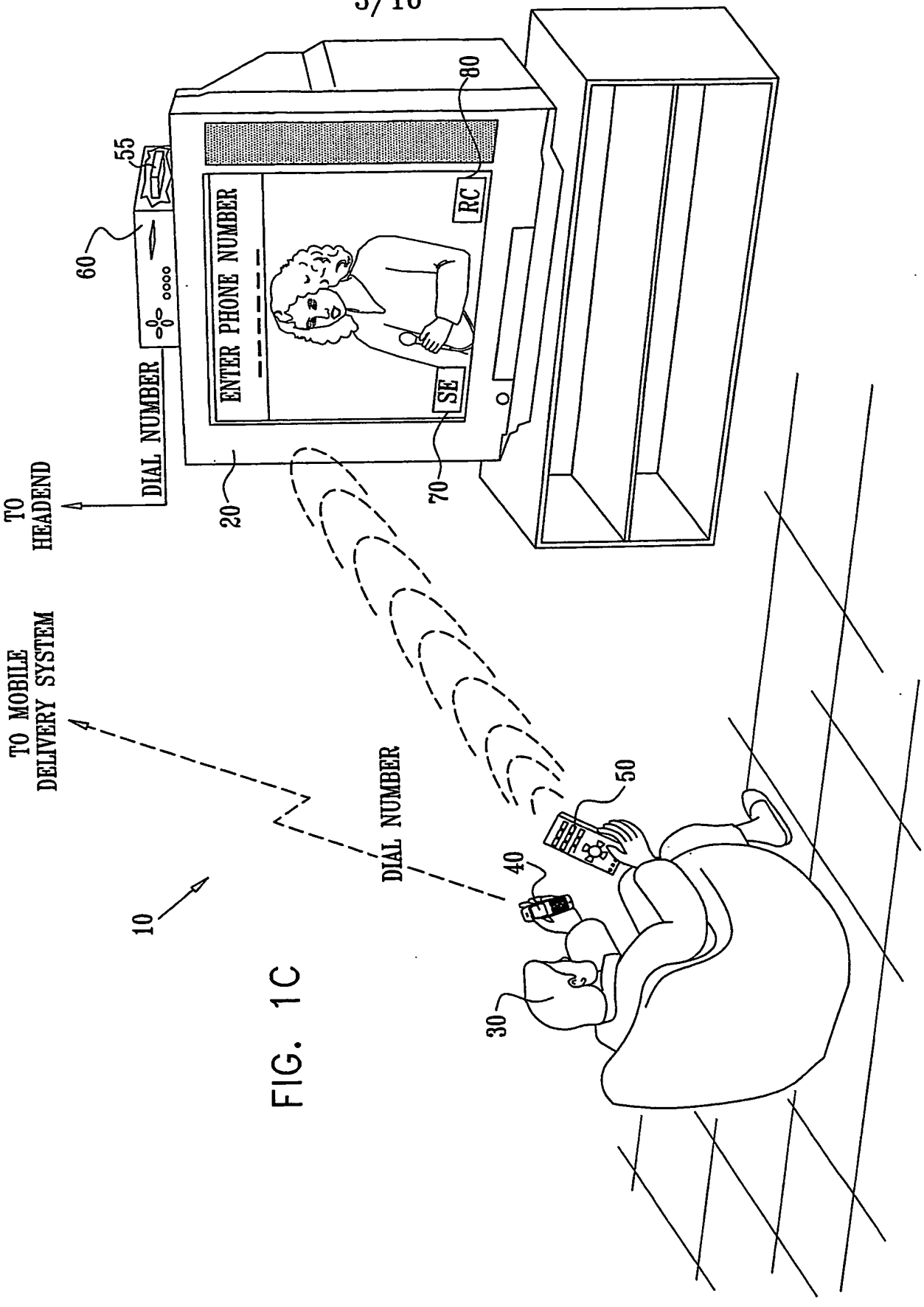

TO HEADEND
TO MOBILE DELIVERY SYSTEM
DIAL NUMBER
10
20
30
40
50
55
60
70
80
DIAL NUMBER
ENTER PHONE NUMBER
RC
SE

FIG. 1C

FIG. 1D

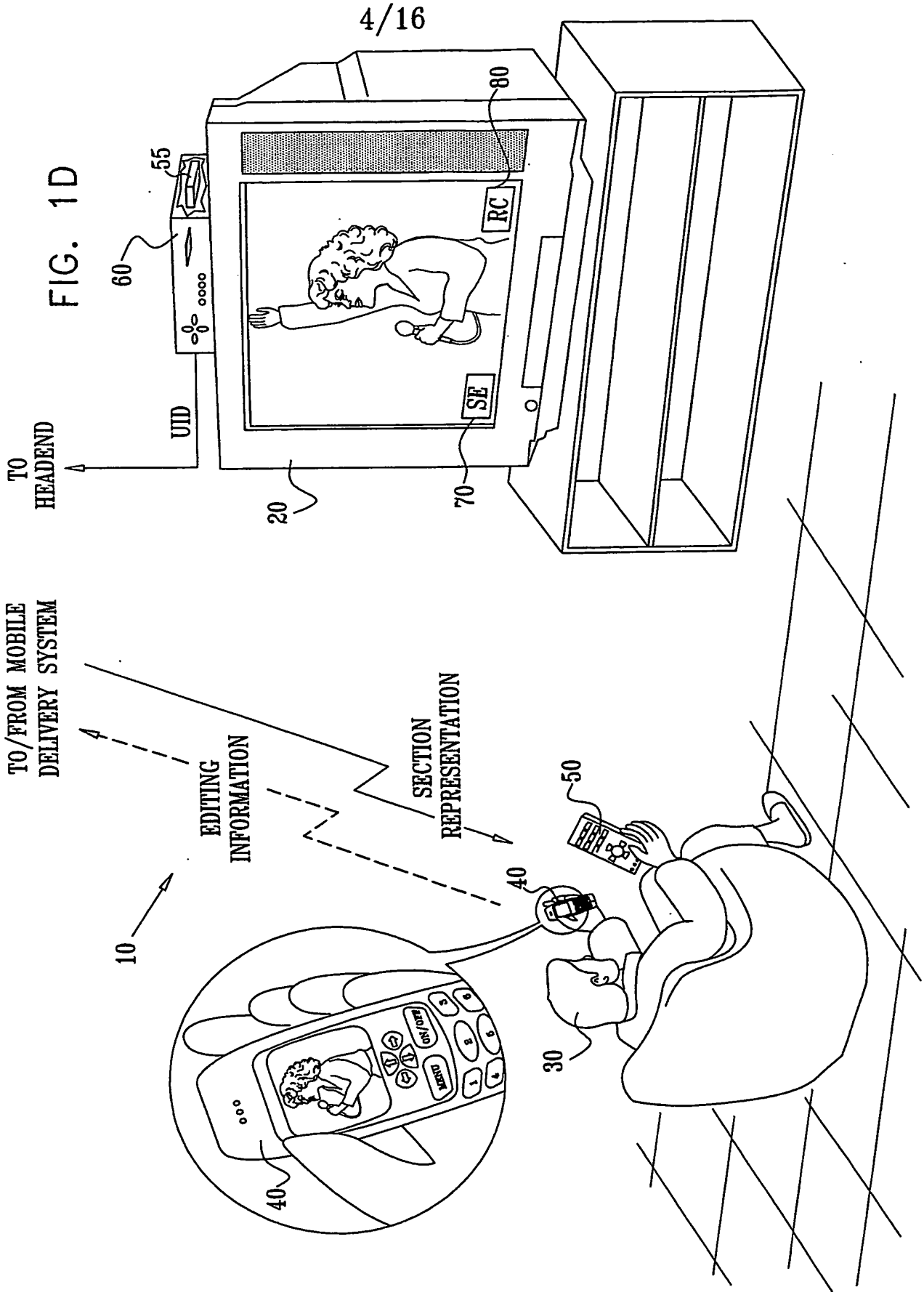

TO HEADEND
UID
60
55
80
RC
SE
70
20
TO/FROM MOBILE DELIVERY SYSTEM
EDITING INFORMATION
SECTION REPRESENTATION
10
40
50
30
40

FIG. 2A

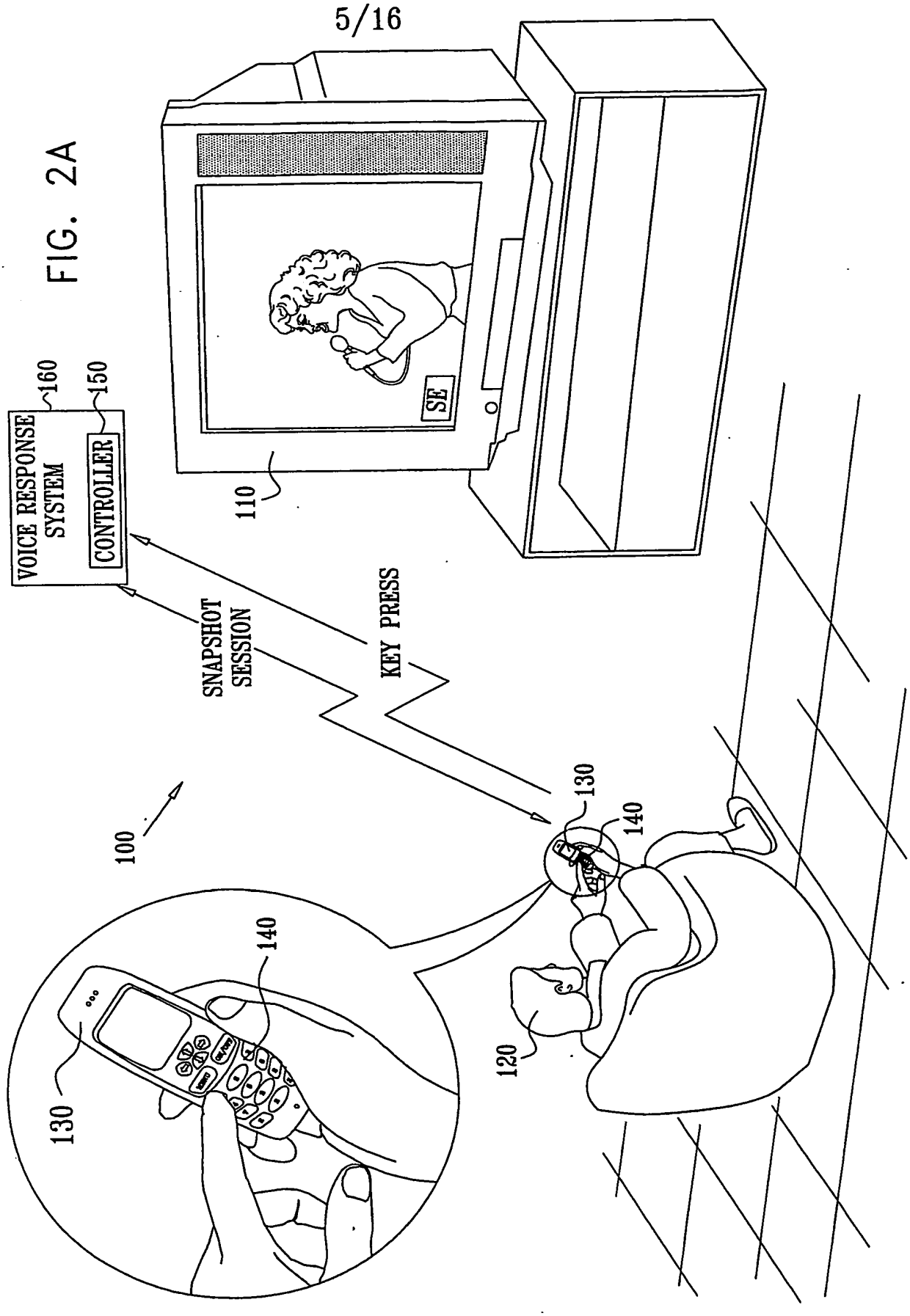

VOICE RESPONSE SYSTEM
160
CONTROLLER
150
110
SE
SNAPSHOT SESSION
KEY PRESS
100
130
140
120

FIG. 2B

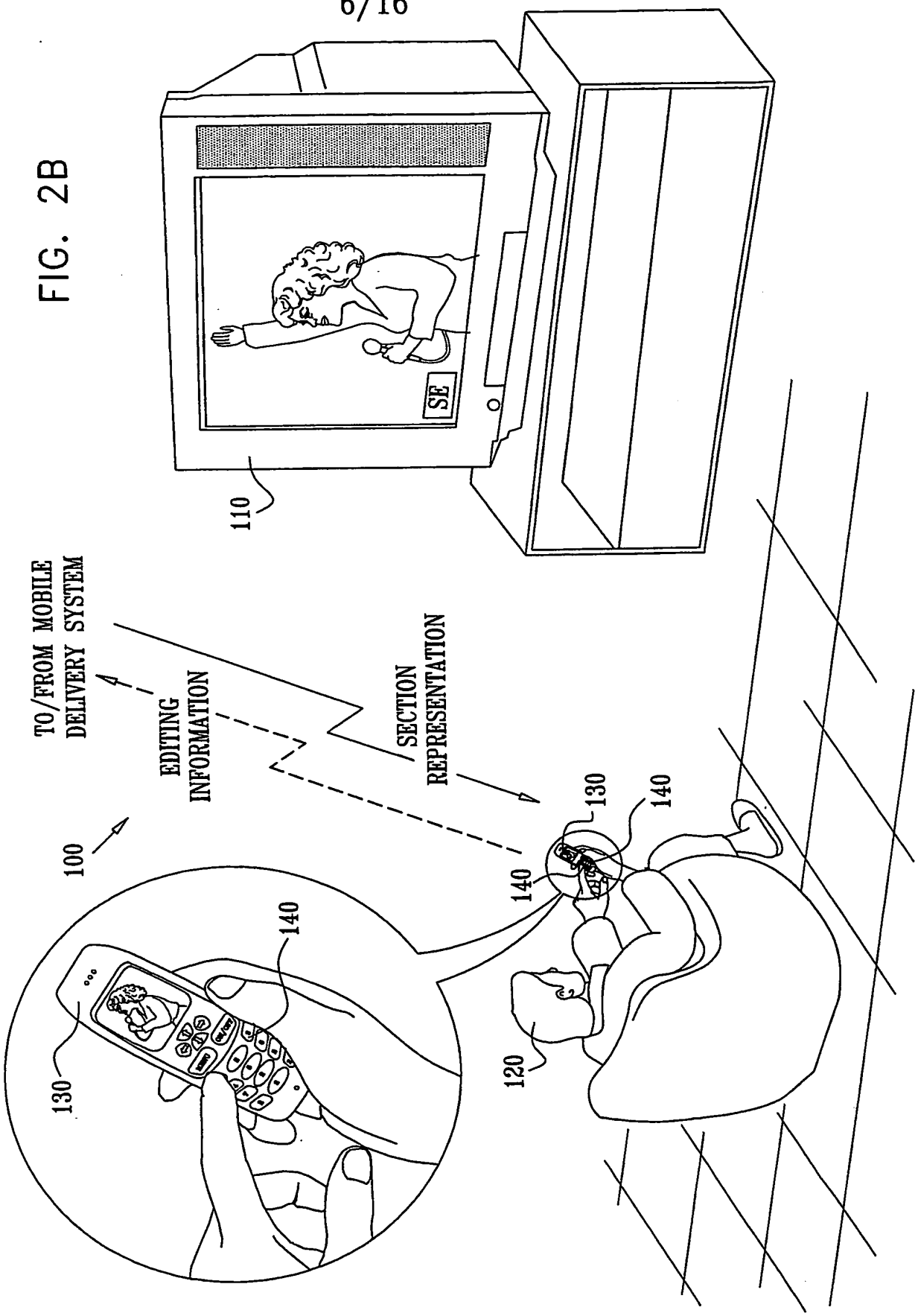

110
SE
TO/FROM MOBILE DELIVERY SYSTEM
EDITING INFORMATION
SECTION REPRESENTATION
100
130
140
140
130
140
120

FIG. 3A

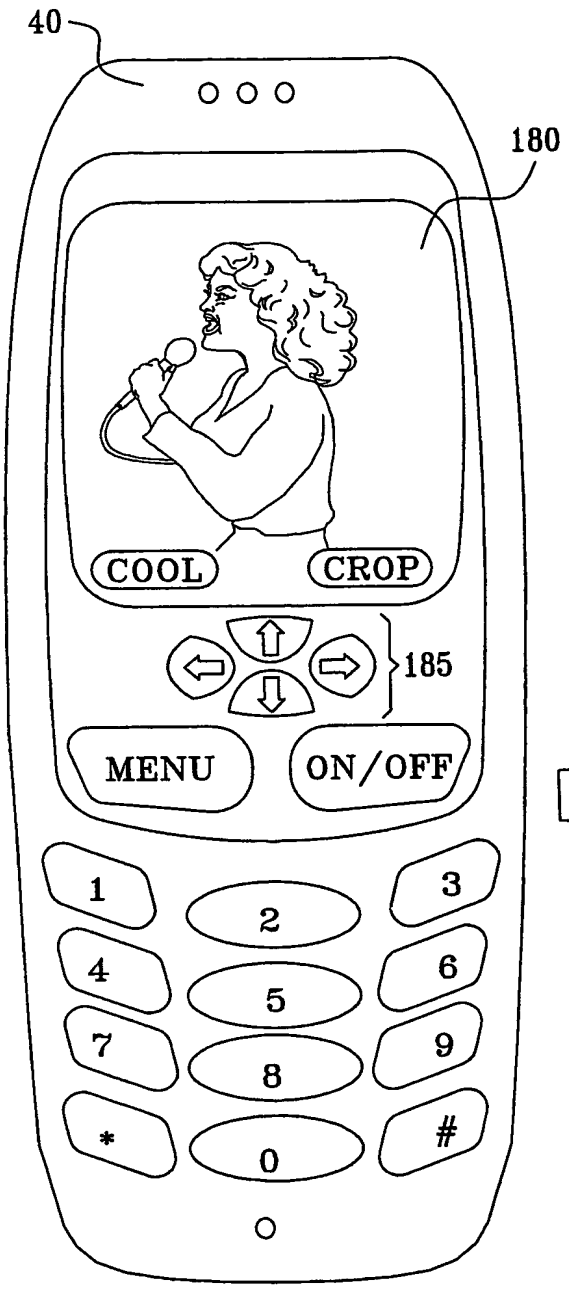

40
180
COOL
CROP
185
MENU
ON/OFF
1
2
3
4
5
6
7
8
9
*
0
#

FIG. 3B

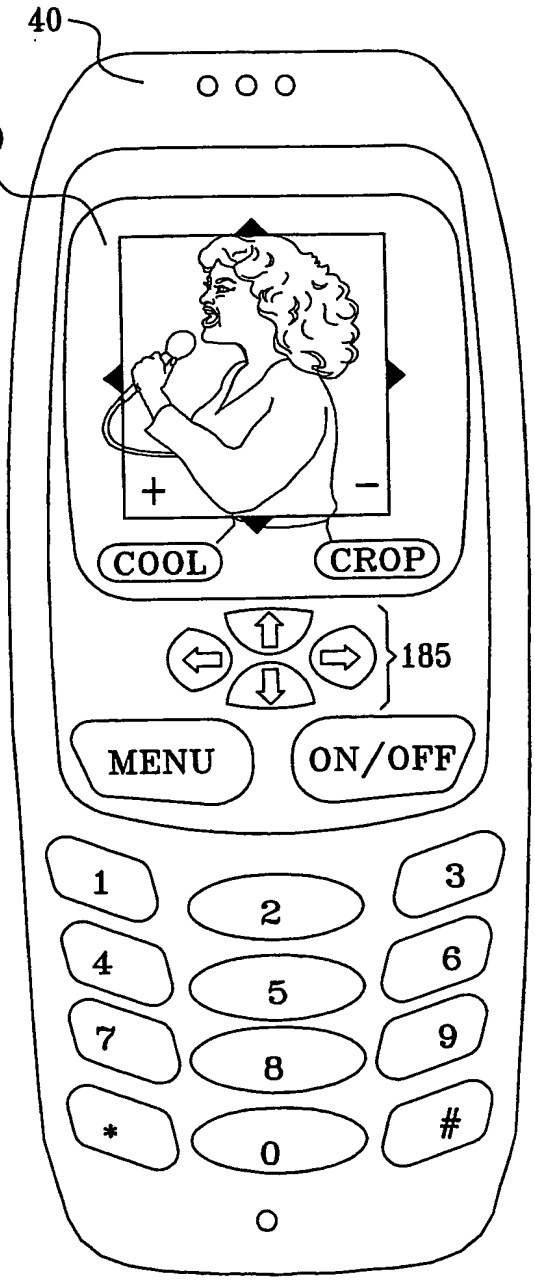

40
180
+
−
COOL
CROP
185
MENU
ON/OFF
1
2
3
4
5
6
7
8
9
*
0
#

FIG. 4A

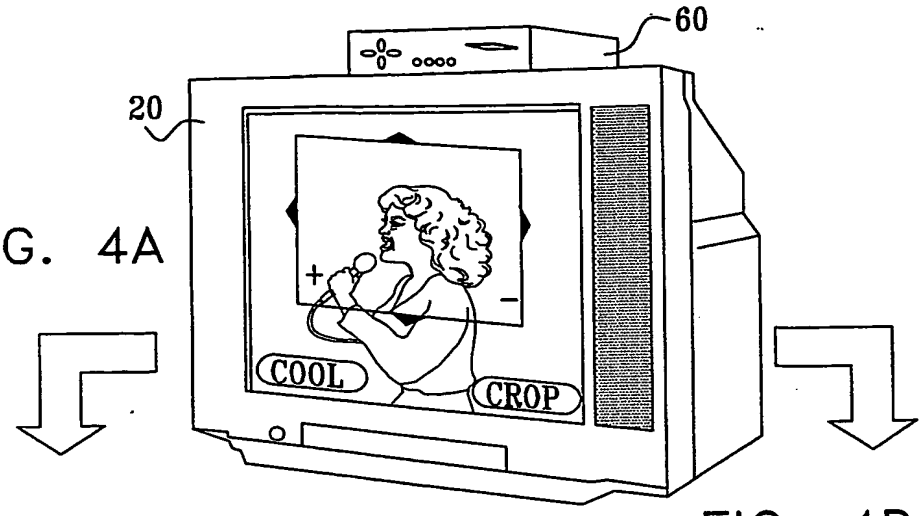


FIG. 4B

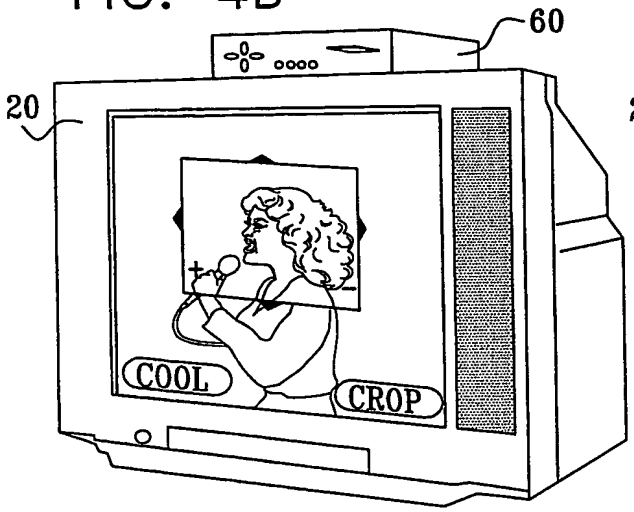
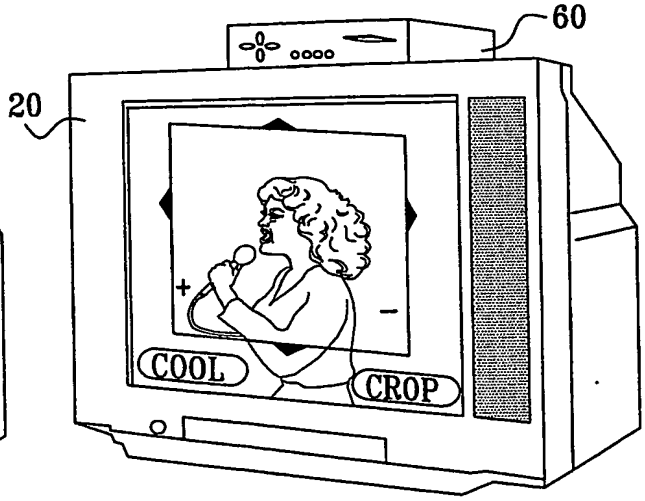


FIG. 4D



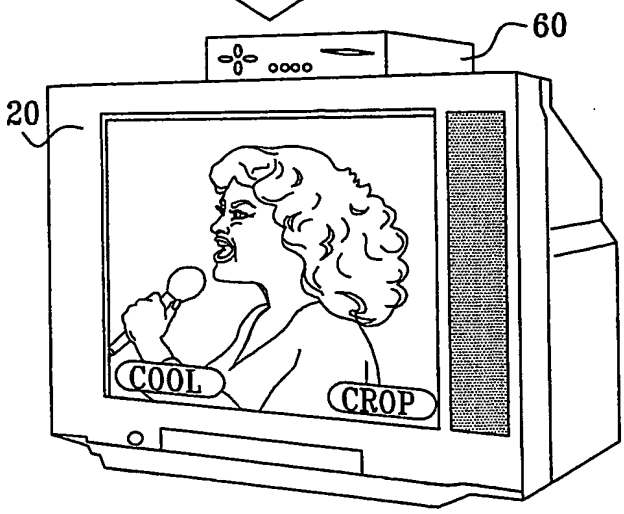


FIG. 4C

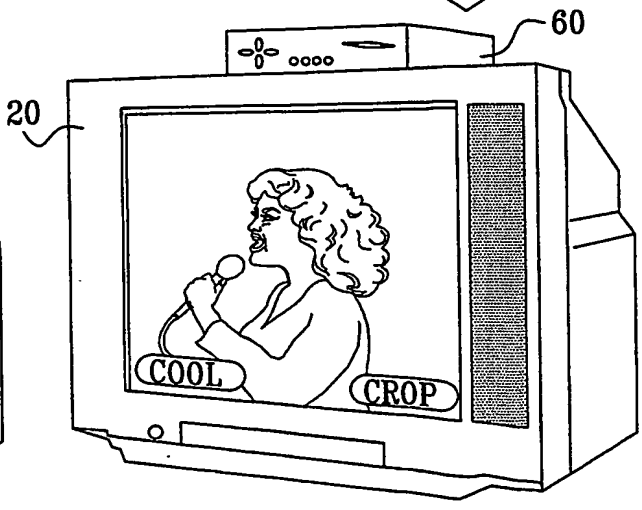
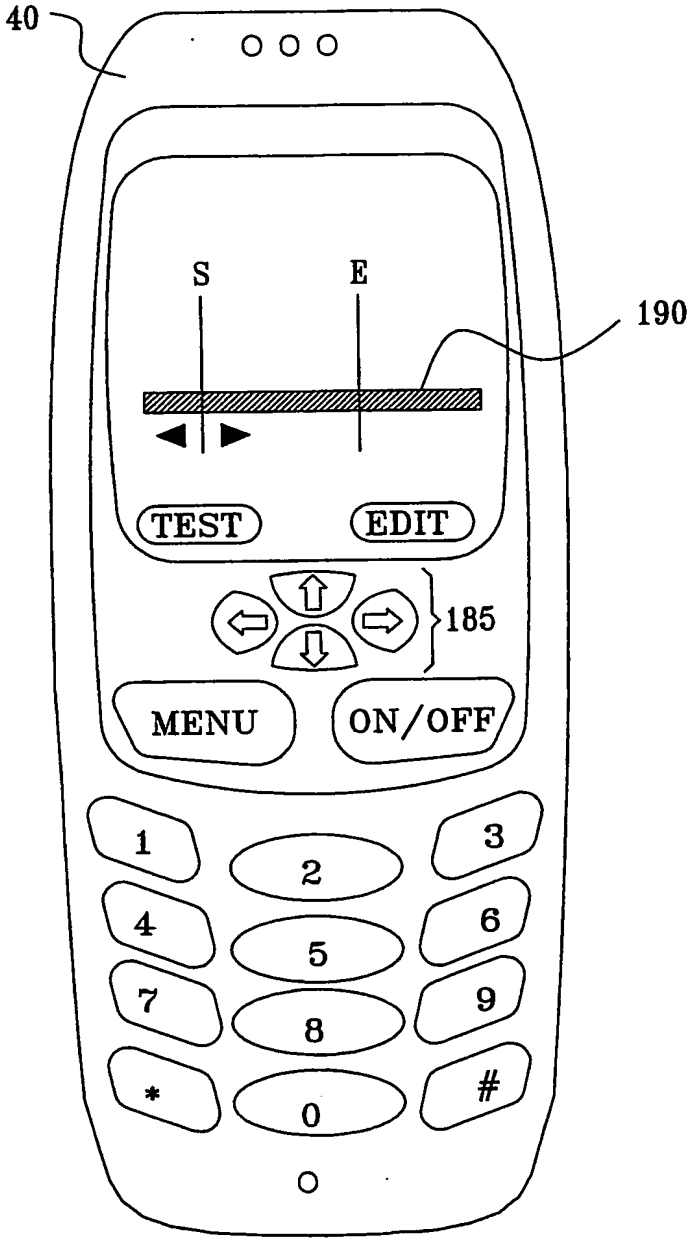


FIG. 4E

FIG. 5



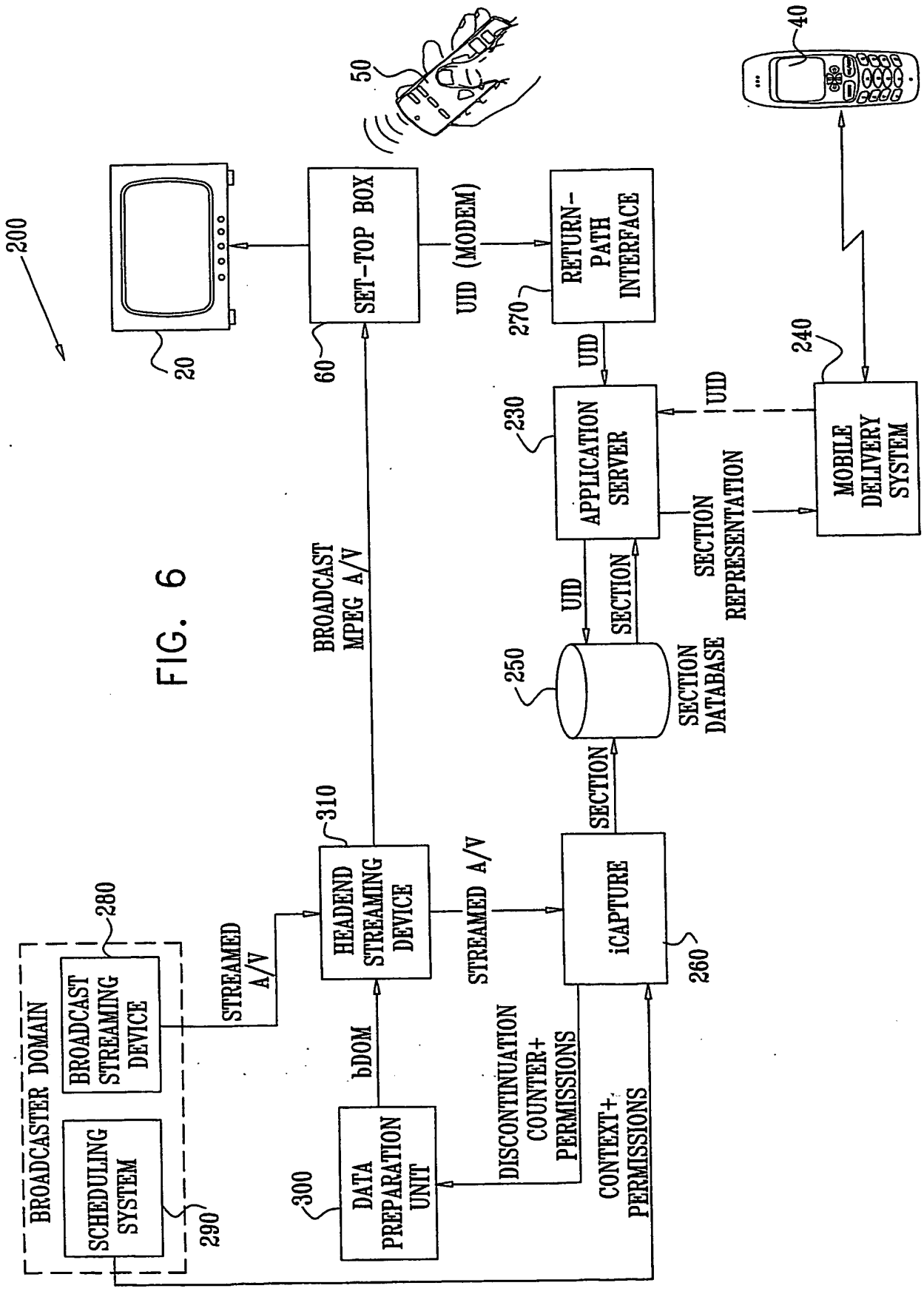

200
20
60
SET-TOP BOX
UID (MODEM)
RETURN-PATH INTERFACE
270
50
40
UID
240
230
APPLICATION SERVER
UID
MOBILE DELIVERY SYSTEM
BROADCAST MPEG A/V
SECTION REPRESENTATION
UID
SECTION
250
SECTION DATABASE
SECTION
310
HEADEND STREAMING DEVICE
STREAMED A/V
iCAPTURE
260
STREAMED A/V
280
BROADCAST STREAMING DEVICE
BROADCASTER DOMAIN
SCHEDULING SYSTEM
290
bDOM
300
DATA PREPARATION UNIT
DISCONTINUATION COUNTER+ PERMISSIONS
CONTEXT+ PERMISSIONS

FIG. 6

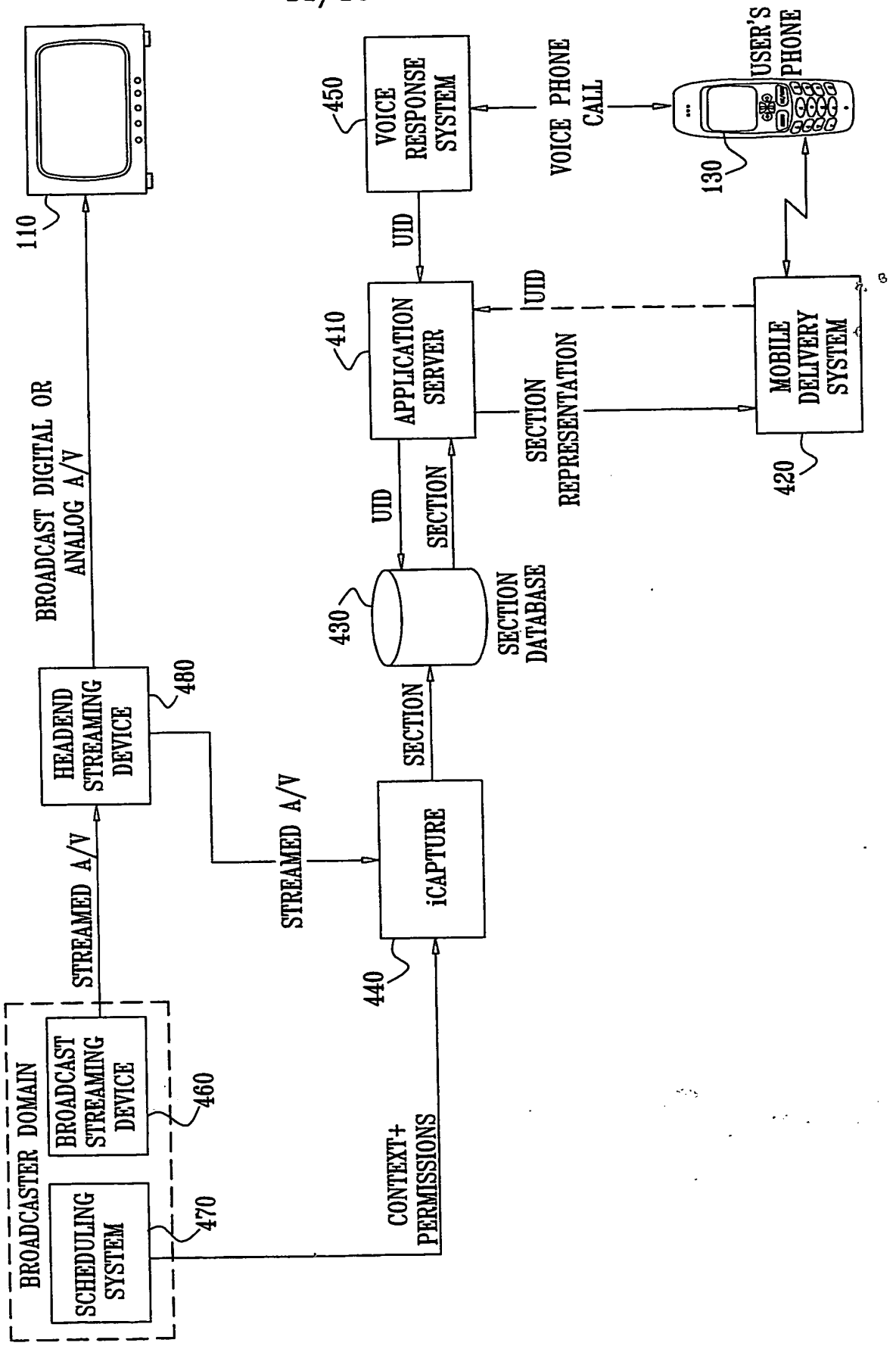

400
110
BROADCAST DIGITAL OR ANALOG A/V
HEADEND STREAMING DEVICE
480
STREAMED A/V
BROADCASTER DOMAIN
BROADCAST STREAMING DEVICE
460
SCHEDULING SYSTEM
470
STREAMED A/V
iCAPTURE
440
SECTION
CONTEXT+ PERMISSIONS
430
SECTION DATABASE
UID
SECTION
410
APPLICATION SERVER
UID
SECTION REPRESENTATION
450
VOICE RESPONSE SYSTEM
UID
VOICE PHONE CALL
130
USER'S PHONE
MOBILE DELIVERY SYSTEM
420

FIG. 7

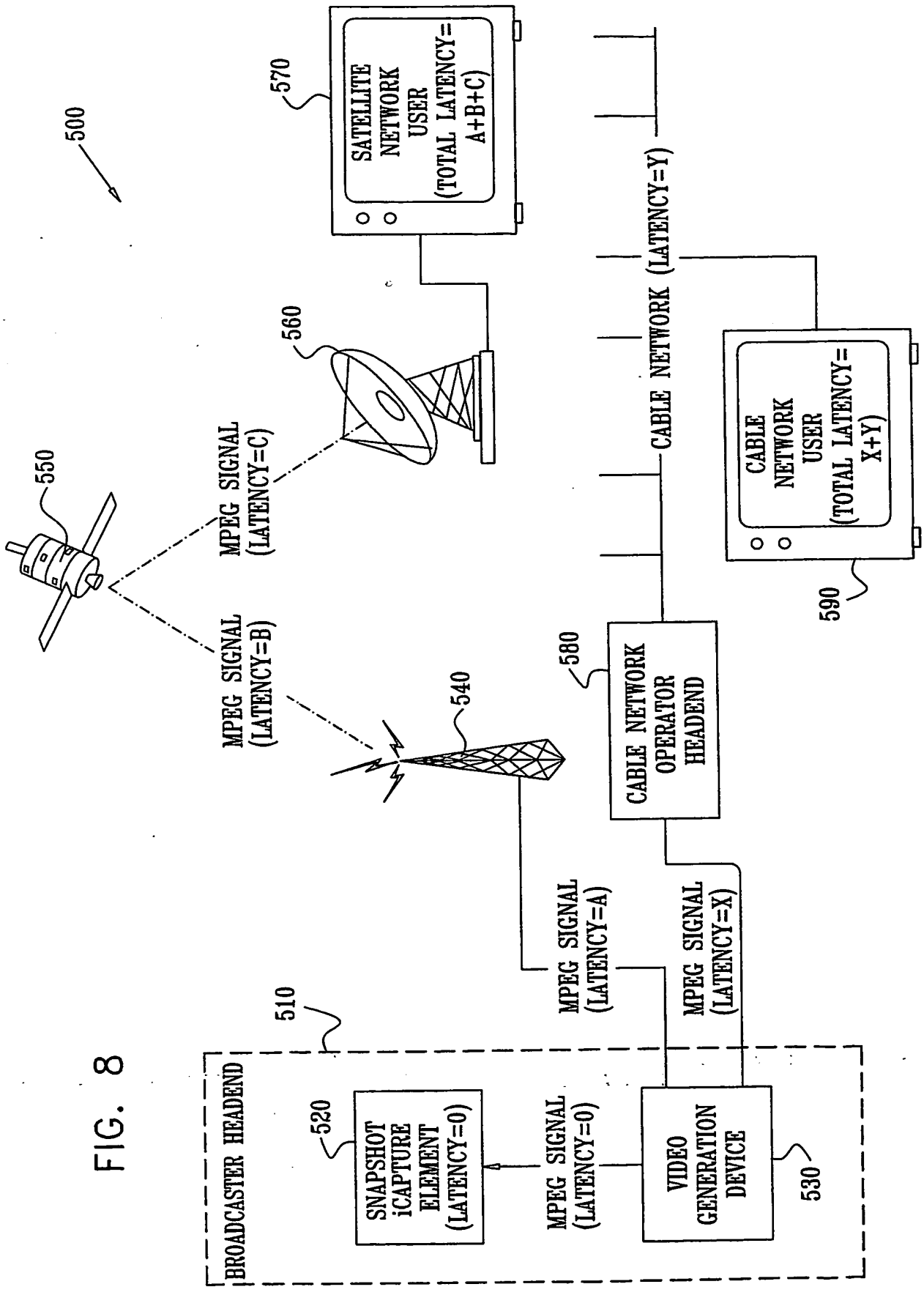

500
570
SATELLITE NETWORK USER (TOTAL LATENCY= A+B+C)
560
MPEG SIGNAL (LATENCY=C)
550
MPEG SIGNAL (LATENCY=B)
540
CABLE NETWORK (LATENCY=Y)
CABLE NETWORK USER (TOTAL LATENCY= X+Y)
590
580
CABLE NETWORK OPERATOR HEADEND
MPEG SIGNAL (LATENCY=A)
MPEG SIGNAL (LATENCY=X)
510
BROADCASTER HEADEND
520
SNAPSHOT iCAPTURE ELEMENT (LATENCY=0)
MPEG SIGNAL (LATENCY=0)
VIDEO GENERATION DEVICE
530

FIG. 8

FIG. 9

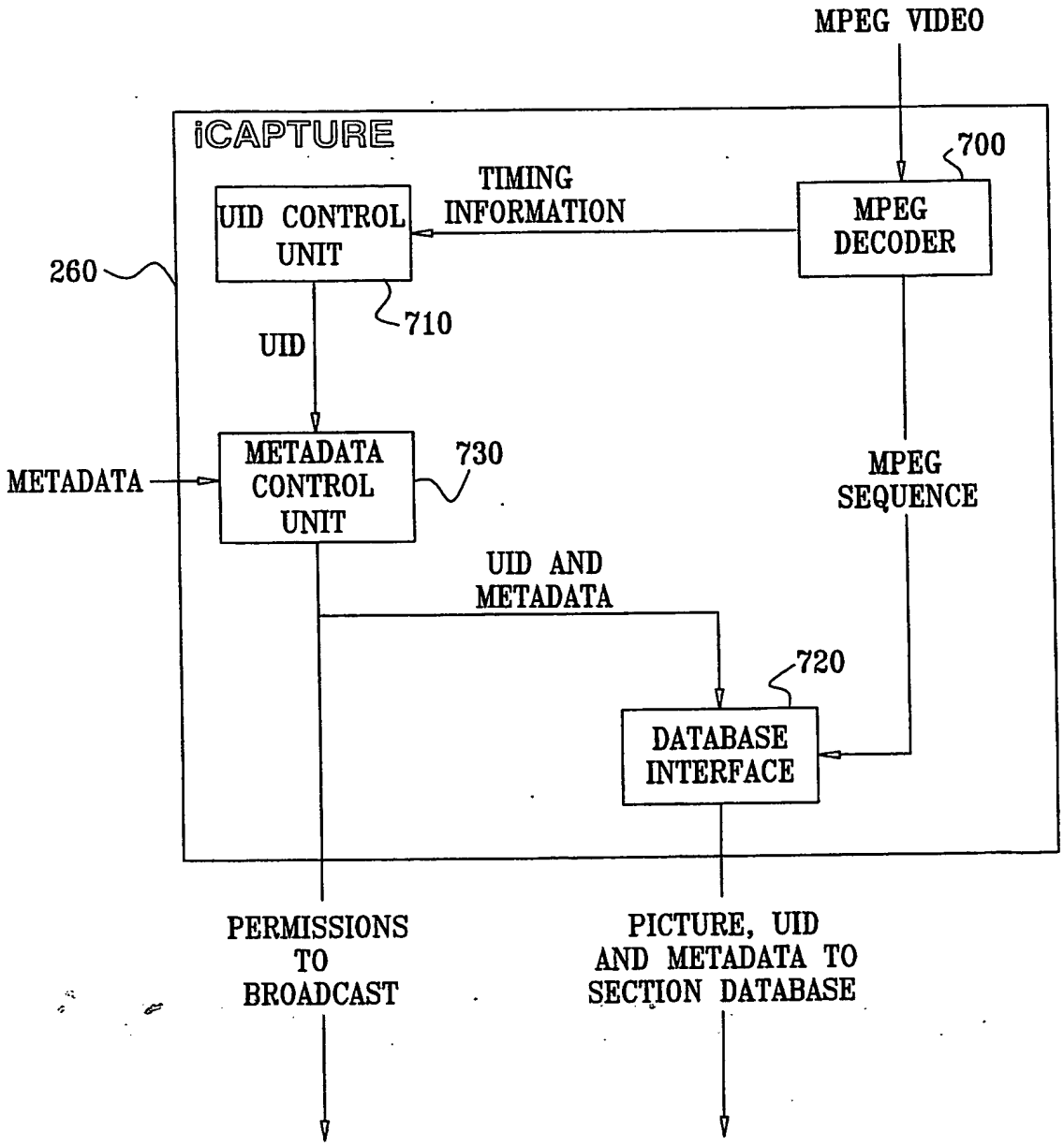

MPEG VIDEO
iCAPTURE
700
TIMING INFORMATION
UID CONTROL UNIT
MPEG DECODER
260
710
UID
METADATA
METADATA CONTROL UNIT
730
MPEG SEQUENCE
UID AND METADATA
720
DATABASE INTERFACE
PERMISSIONS TO BROADCAST
PICTURE, UID AND METADATA TO SECTION DATABASE

FIG. 10

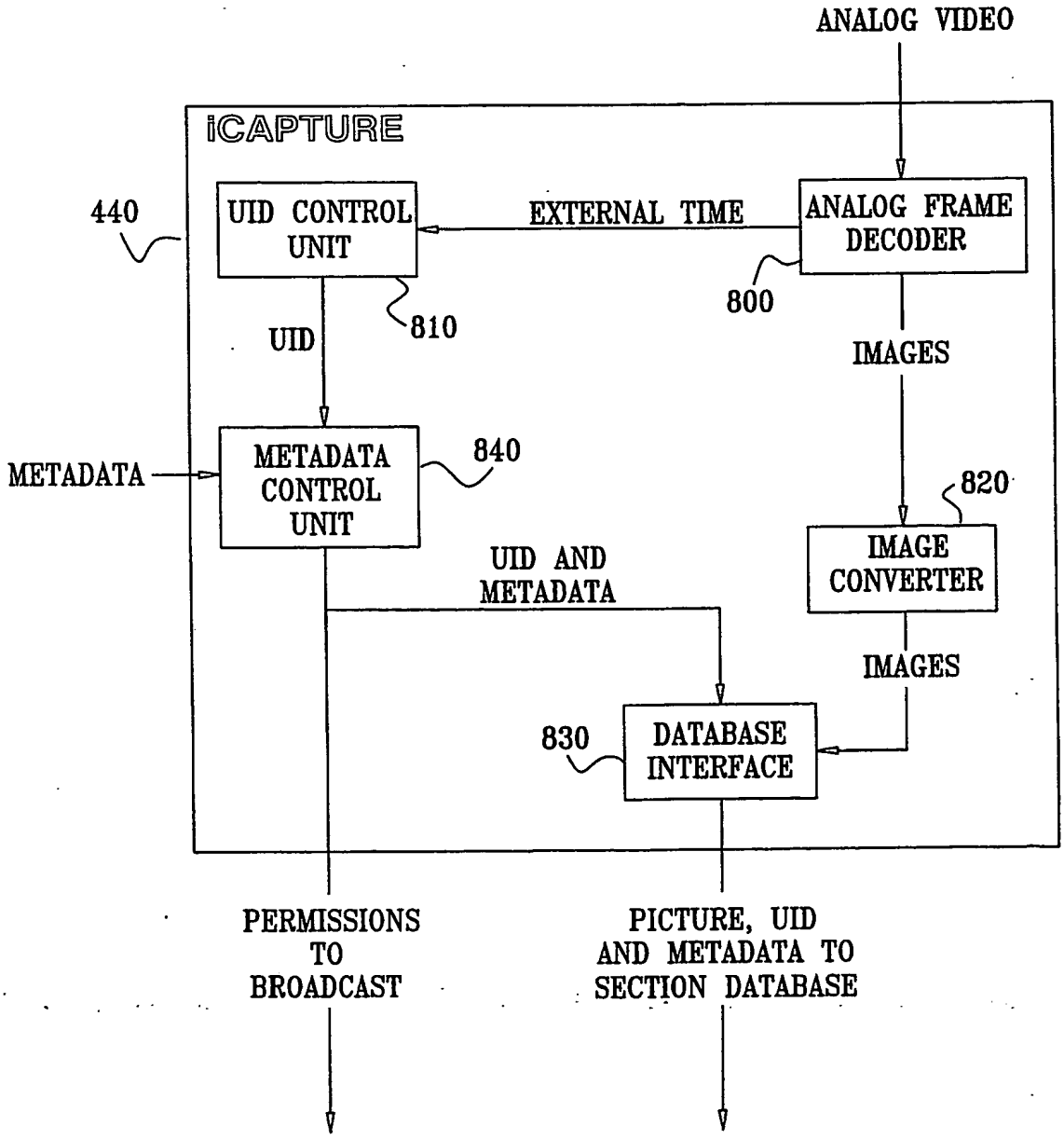

ANALOG VIDEO
iCAPTURE
440
UID CONTROL UNIT
EXTERNAL TIME
ANALOG FRAME DECODER
800
810
UID
IMAGES
METADATA
METADATA CONTROL UNIT
840
820
IMAGE CONVERTER
UID AND METADATA
IMAGES
830
DATABASE INTERFACE
PERMISSIONS TO BROADCAST
PICTURE, UID AND METADATA TO SECTION DATABASE

FIG. 11

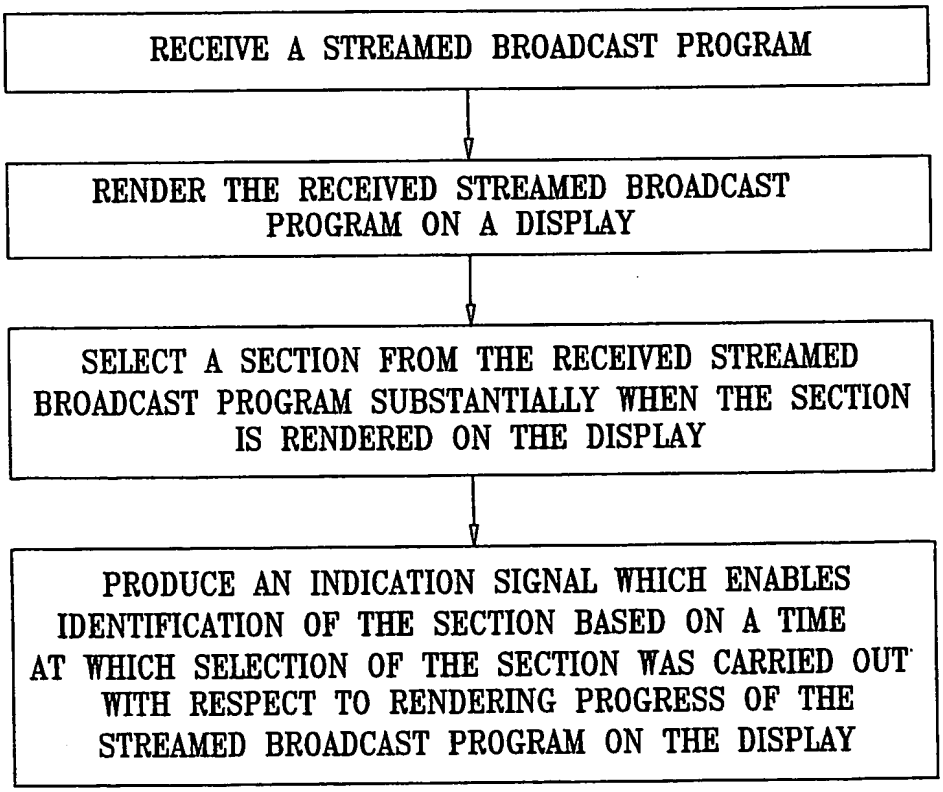

RECEIVE A STREAMED BROADCAST PROGRAM
RENDER THE RECEIVED STREAMED BROADCAST PROGRAM ON A DISPLAY
SELECT A SECTION FROM THE RECEIVED STREAMED BROADCAST PROGRAM SUBSTANTIALLY WHEN THE SECTION IS RENDERED ON THE DISPLAY
PRODUCE AN INDICATION SIGNAL WHICH ENABLES IDENTIFICATION OF THE SECTION BASED ON A TIME AT WHICH SELECTION OF THE SECTION WAS CARRIED OUT WITH RESPECT TO RENDERING PROGRESS OF THE STREAMED BROADCAST PROGRAM ON THE DISPLAY

FIG. 12

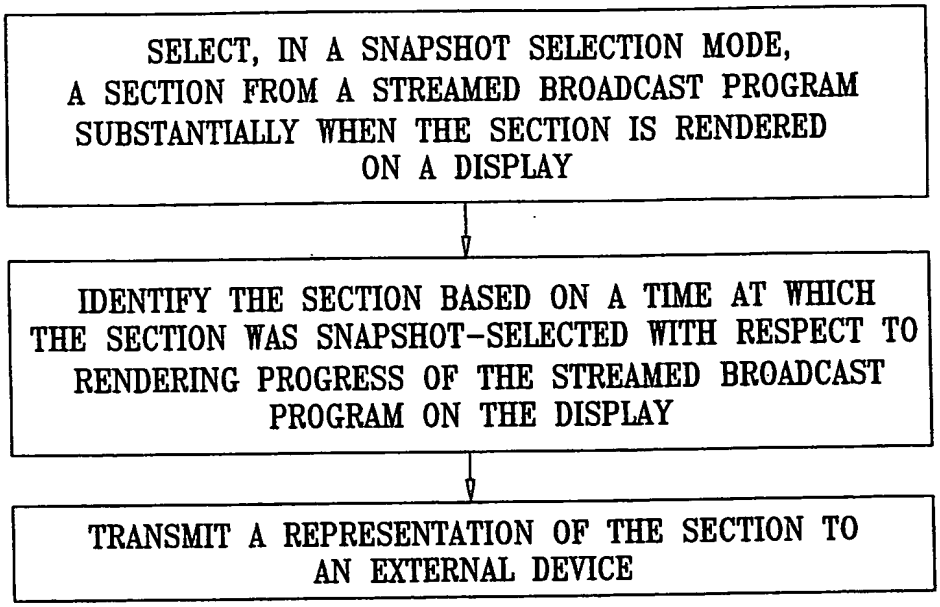
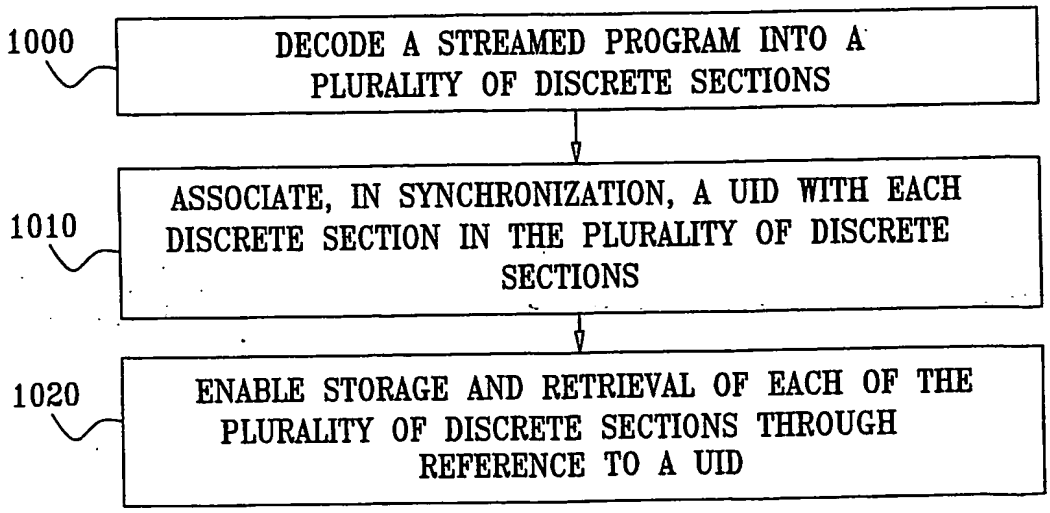

SELECT, IN A SNAPSHOT SELECTION MODE, A SECTION FROM A STREAMED BROADCAST PROGRAM SUBSTANTIALLY WHEN THE SECTION IS RENDERED ON A DISPLAY
IDENTIFY THE SECTION BASED ON A TIME AT WHICH THE SECTION WAS SNAPSHOT-SELECTED WITH RESPECT TO RENDERING PROGRESS OF THE STREAMED BROADCAST PROGRAM ON THE DISPLAY
TRANSMIT A REPRESENTATION OF THE SECTION TO AN EXTERNAL DEVICE

FIG. 13


1000
DECODE A STREAMED PROGRAM INTO A PLURALITY OF DISCRETE SECTIONS
1010
ASSOCIATE, IN SYNCHRONIZATION, A UID WITH EACH DISCRETE SECTION IN THE PLURALITY OF DISCRETE SECTIONS
1020
ENABLE STORAGE AND RETRIEVAL OF EACH OF THE PLURALITY OF DISCRETE SECTIONS THROUGH REFERENCE TO A UID